NR 445 Technical Advisory Group Meeting 3
April 27, 2000 Notes
(UW Madison, Class of '24 Reception Room)

TAG Attendance: Jim Beasom, Appleton Papers, Inc.; Dave Gardner, Briggs &Stratton Corp.; Hank Handzel, WPC&PIW; John Hausbeck, Madison Public Health; Howard Hofmeister, Bemis Co.; Lynda Knobeloch, WI Bureau of Public Health; Chris Koceja, Mann Bros.; Brian Mitchell, WI Cast Metals Assoc.; Anne Neudorfer, WI Cast Metals Assoc.; Michele Palmer, USEPA Air Program; Annabeth Reitter, Consolidated Papers, Inc.; Keith Reopelle, WI Environmental Decade; Rudy Salcedo, City of MKE Health Dept; Rob Sherman, Kraft Foods; Pat Stevens, WMC; Ty Stocksdale, SC Johnson; Caryl Terrell, Sierra Club; Eric Uram, Sierra Club; Liz Wessel, Environmental Policy Consultant; RB Willder, WI Transportation Builders Assn.; Ed Wilusz, WI Paper Council - *Committee Attendance*: Jill Stevens, Alliant Energy; Bob Fassbender; Luis Fernandez, UW-Madison Safety Dept.; Lynn Knudtson; Robert Heitzer; Eric Eckert for Myron Hafele; Ron Kilby; Peter Tolsma; Todd Sandman, 3M;

Morning Session:

I. Welcome/ Introduction/ Meeting Review

A. Review of Meeting 1 Notes

- Ty Stocksdale of SC Johnson made the correction to a statement located under the second bulleted point from the bottom on page 8 of the March 22, 2000 Meeting Notes. Rather than reading, "T. Stocksdale noted that even pharmaceuticals were added to the list, which he believes "is laughable."" The sentence should read, "T. Stocksdale noted that even pharmaceuticals that were added to the list were laughable, and the reason is that the pharmaceuticals have not been produced for over 30 years."
- Caroline Garber of the WDNR requested comments on the usefulness of the detail in the meeting notes. The consensus of the TAG members was to retain the level of detail in future meeting notes.

B. Agenda review

- The agenda was reviewed with no suggested additions.

II. Status Report from Modeling Sub-Group

A. John Roth (Air Quality Dispersion Modeler, DNR) delivered the status report to the TAG.

- J. Roth stated that the sub-group had met and addressed the following issues.
  - Should the dispersion model be changed? The EPA has proposed to change the default model, and the sub-group is still considering this question.
  - The rural vs. urban modeling issue. 99% of the State of Wisconsin is considered rural under the current EPA definition. There are differences in the modeling dispersion coefficients between rural and urban that affect the mixing height. Urban considers the "urban heat island" effect and rural does not. The sub-group believes the modeling should be revised according to whether a source is in a rural or urban location. Concentrations will increase or decrease based on the dispersion coefficients.
  - The issue of building down-wash was raised. It is suggested that 2 or 3 more categories be added to account for down-wash because current categories are too broad. This should allow sources to decide whether they are "in or out."
  - Presently, the meteorological data comes from 1 year of Green Bay weather data. The suggestion is to use 5 years of data from Green Bay, Milwaukee, Madison and Eau Claire. The worst single year would be used for Table 3 chemicals. The worst day would be used for the 24 hour standard and the worst hour would be used for the 1 hour standard.

B. J. Roth posed more questions and sparked more conversation.

- J. Roth stated that the Jim Beasom had commented in the Sub-Group meeting that the TLV is conservative. J. Roth asked whether the DNR should use the worst case hour during a 20 year period.

Should a statistical method be used? J. Roth stated that these questions as well as human health need to be considered, and he welcomes comments.

Comments from TAG and Committee Members

- Lynda Knobeloch of the Wisconsin Bureau of Public Health said she took issue with the statement that the TLV is conservative.
- Caryl Terrell of the Sierra Club summarized what she heard. She asked if it is correct to say that the EPA feels that Wisconsin is 99% rural and that all the data should be redone to reflect this. She followed this by stating that she participated on the State's local emergency planning board for releases of chemicals to the environment. She said that there are tremendous differences between rural and urban areas in Wisconsin. C. Terrell said that the emergency planners run both urban and rural analyses to see what the effect in the community would be, and this would allow an evaluation using both sets of results. She does not agree that Wisconsin is 99% rural. She would like that *both* rural and urban models be considered.
- J. Roth explained that there is a scientific basis for using rural or urban dispersion coefficients. Urban includes heavy industry and/or a large concentration of houses. He explained that Milwaukee has a "Lake Michigan effect," which has a rural effect since it is generally flat or smooth. In the country, wind speed increases due to differences in surface friction, etc.
- C. Terrell said that the DNR should look at both rural and urban situations.
- J. Roth said that the use of different models should be considered. He asked where should modelers stop being overly conservative and where should the real world come in to play. He said the committee should look at both.
- Jim Beasom of Appleton Paper, Inc. responded to C. Terrell by stating that there are tremendous concentration differences that must be considered. Concentrations released during emergency response situations are orders of magnitude greater (1,000 to 10,000 times greater) than normal, low-rate, facility emissions. First responder modelers use both rural and urban modelling coefficients to find the worst case situation, since the emissions from a large spill could be immediately dangerous to life and health. Jim feels that for NR 445 purposes, the use of both urban and rural coefficients to develop additional tables would not change the end results enough to justify adding more complexity to an already complex rule.
- *Qu.* - Pat Stevens of WMC said that he is trying to understand the difference between urban and rural versus receptor modeling. He asked if a very conservative distance figure is used in the receptor model.
- *Ans.* - J. Roth said that the receptor uses a 1-meter grid spacing. The ISCST3 model does not consider the area close to the stack as this is a very turbulent region and the Gaussian plume equations do not apply. This region of no concentration extends downwind to a distance three times the lesser of the building height or width. This distance varies as the wind changes direction since the width of the building varies depending on how you view it. For example, if a stack is on a 40-foot building that is 200 feet wide when the wind is blowing from the west, then the region of no concentration extends 120 feet east from the stack.
- *Qu.* - P. Stevens asked if this reflects reality.
- *Ans.* - J. Roth said that he believes that this represents both a realistic situation and worst case. There are instances, especially in Milwaukee and Madison where a source is located in a residential area, and the backyards of the neighbors are right against the sources buildings.
- *Qu.* - Rudy Salcedo of the City of Milwaukee Health Department asked if no decision had been made as to the dispersion coefficients at this point in time.
- *Ans.* - J. Roth said that he would be happy to present a table of rural versus urban dispersion coefficients at the next meeting.
- *Qu.* - Howard Hofmeister of the Bemis Co. asked if they were talking about setting up tables? He said that some cases will increase and others will decrease.

- *Ans*. - J. Roth said that the change would be compared to the table shown at the last meeting and that the change would be based on an urban and a rural dispersion coefficient. Concentrations will change, with some increasing and some decreasing, and this would cause changes in the threshold rates in the table.
- *Qu*. - H. Hofmeister asked if one basic set of data was run with dispersion coefficients would one number result?
- *Qu*. - C. Garber asked if the rural vs. urban issue would apply depending on the model chosen too?
- *Ans*. - J. Roth answered yes to both questions.
- *Qu*. - H. Hofmeister asked if J. Roth had a feel for the range when values go up and down.
- *Ans*. - J. Roth stated that he believes the range would be an increase or decrease of 20% to 50% at most.
- *Qu*. - P. Stevens asked if this was the place and time to discuss setting these thresholds.
- *Ans*. - C. Garber and J. Roth said no this is just a status report, and the issue of setting threshold levels would be discussed later in the meeting.
- *Qu*. - L. Knobeloch asked if the basic difference between the dispersion coefficients was wind speed.
- *Ans*. - J. Roth said that it is a difference in the mixing height, the temperature change with height, the change of wind speed with height, and differences in the dispersion coefficients. The wind speed increases more quickly with height in a rural setting due to a decrease in surface friction. In addition, a rural setting can have a lower mixing height due to the same effect.
- *Qu*. - L. Knobeloch asked if any data exists on which a decision was based to determine whether Green Bay is rural or urban, and if any studies had been done to consider this issue.
- *Qu*. - H. Hofmeister asked if the 20% to 50% variations were for a 24-hour period.
- *Ans*. - J. Roth said that the 24-hour period had the most variability.
- *Qu*. - P. Stevens asked if the issues on the memo are still on the table.
- *Ans*. - J. Roth said, in summary, that the sub-group will consider and report back to the TAG on the following issues.
    1. Should a full 20 years of meteorological data be used for the modeling?
    2. Rural versus urban dispersion coefficients.
    3. Which model should be used?
    4. Should the highest value, second highest, or 95th percentile be used for selecting the meteorological data?

III. Decision Criteria for Listing Chemicals in NR 445 ***PROPOSAL***

Purpose: To present and discuss Proposed Decision Criteria for Listing Chemicals in NR 445, including a ***proposal*** *for addressing chemicals with TLVs > 99 ppm. The Proposed Decision Criteria may be revised again following the TAG discussion.*

- Presentation of Proposed Decision Criteria for Chemicals with TLVs>99ppm
    - Andy Stewart, DNR Air Management Engineer

C. Garber introduced the presentation by stating that the TAG had previously discussed how chemical tables 1, 2 & 4 with TLVs >99 ppm should be addressed and that the DNR staff had done an analysis with the **proposal**.

A. *Analysis of Chemicals with TLVs >99 ppm*

(Andy Stewart introduced this presentation by having the group look at the table entitled **"Chemicals with TLVs > 99 ppm."**)

- A. Stewart described the table by stating that it includes the 17 chemicals with TLVs of at least 100 ppm that had been proposed for listing in NR 445 and that the chemicals are listed in order of toxicity with least toxic chemicals at the top. The current **proposal** is not to list these 17 chemicals in NR 445, but to list them in NR 438, the air emission inventory regulations, with a reporting

threshold at 6,000 lb/yr. Three of the chemicals (Methyl chloroform, Methanol and MEK – lightly shaded) are already listed in NR 438

- Columns 7, 8 and 9 in the table shows the threshold rates, which would apply if the, chemicals were listed in NR 445.
- The last column on the table "Maximum Emissions from a Single Source in 1998 AEI" lists the largest single source of actual emissions as reported in the emissions inventory. This data is limited because reporting is not required for 14 of the 17 chemicals. Acetone emissions used to be reported but are no longer reported because acetone has been de-listed as a VOC by the USEPA, although some sources have continued to report it. Acetone (5,742 lb/yr) and methyl chloroform (4,324 lb/yr) do not approach the level that would be proposed as the regulatory threshold, but the methanol (2,674,670 lb/yr) level is well above the short and tall stack proposal threshold. The maximum emission level of a single source for MEK (487,054 lb/yr) is between the short stack and tall stack levels.
- Even though the single source level is above the regulatory level for methanol and MEK, the DNR has conducted site specific modeling and found that the off-site impact for the largest single source is only a fraction of the health value.
- A. Stewart noted, by indicating the bottom set of columns on the same handout, that all 17 chemicals are considered to be EPA "High Production Volume Chemicals". He also noted that VOC regulations are not a "back stop" for ensuring emissions do not exceed an AAC and that 4 of the 17 chemicals are not VOCs. Therefore, they are not covered at all under reporting requirements. For the other 13 VOCs, sources should be tracking them for NR 438 purposes as a part of the "total VOC soup," and they are included in emission fee calculations. Of the other 4 non-VOCs, 3 would be "billable" if added to the AEI, but there would be no double billing. The fourth one is already a reportable and billable chemical. This is indicated in the 6th column in the bottom set of columns. The table includes a column listing total 1998 AEI emissions in lb/yr as well as a listing by chemical emitted of the Toxics Release Inventory (TRI) chemicals for 1997.
- A. Stewart asked for questions and comments.
- *Qu.* - B. Heitzer asked why acetone is included in the list for 1998. He said that the instructions are not to report acetone in 1998.
- *Ans*. - A. Stewart replied said this was not a reporting error and that some sources still report acetone because it is one chemical in subset of chemicals some companies already report. He commented that the acetone number in 1998 is close to values seen when acetone reporting was required.

B. Decision Criteria for Listing Chemicals with TLVs >99 ppm on NR 445 (*PROPOSAL)

(Note: This is the second **proposal** involving NR 445 submitted by the DNR staff included on a single sheet of paper with six slides)

- Slide 1 (numbered 2) – Goals and Objective – A. Stewart emphasized that as an agency, the DNR wants to track toxic chemicals because they have identifiable health effects associated with them. The goal is to monitor emissions of chemicals having TLVs >99 ppm without having redundant or unnecessary regulations. The objective is to ensure that emissions of all Hazardous Air Pollutants (HAPs) having identified health effects are below levels that can cause an adverse impact on public health.
- Slide 2 (numbered 3) – Currently, emissions of chemicals with TLVs > 99 ppm do occur in Wisconsin at levels that need to be monitored and state & federal emissions reporting requirements are inadequate to track 14 or the 17 HAPs discussed. Emissions of 4 HAPs for which there is inventory information indicates that emissions are below a level of health concern.
- Slide 3 shows a list of the 17 chemicals and the proposed reporting level of 6,000 lb/yr.
- Slide 4 shows the current WDNR staff **proposal**. The **proposal** has three main points, which include (1) not listing the 17 HAPs having TLVs > 99 ppm in NR 445 (2) for tracking purposes, require

reporting for the 14 HAPs not currently in NR 438 (3) revise NR 445 to provide a clear mechanism for DNR & DHFS to deal with source specific situations

- This should allow reviews of sources that exceed or approach thresholds. A. Stewart gave an example stating that the lowest proposed regulatory threshold is 30 times the AEI reporting threshold value. This refers to tert-Butanol in the "Chemicals with TLVs > 99 ppm" table. The values compared are the proposed AEI reporting threshold of 6,000 lb/yr versus 183,960 lb/yr proposed for 445 for ≤ 25 feet stack.

- *Qu*.- C. Terrell asked if there is a piece of information that the DNR is not getting. She stated that the threshold of 6,000 pounds is an annual number and that this does not include a 24-hour or 1 hour period that may exceed the threshold.
- *Ans*. - A. Stewart said that this concept would allow the DNR to focus on sources that may be exceeding the threshold on the short term by going back to permits. Andy agreed that it would be better to get that information from everyone.
- J. Beasom said that the 6,000 pound threshold needs to be put into context. He gave the example that a 3,000 pound vehicle that travels 15,000 miles in a year would emit a total of 6,000 pounds of carbon dioxide in a year. His point is that 6,000 pounds is not a lot.
- A. Stewart continued by stating that the lowest lb/hr short stack rate is 21 lb/hr.
- C. Terrell said that the problem is that it is not averaged over a 24 hour period.
- R. Salcedo said that he was not clear why the **proposal** was being presented at this point, and asked what the rationale for this was.
- A. Stewart said that the presentation is being made at this time because a statement made at the previous meeting needed to be addressed. It was said that due to the low toxicity of the 17 chemicals that emissions from sources in Wisconsin do not occur at levels of concern. The rationale is to have a mechanism to identify when actual emissions of these chemicals are approaching a level where they may become a public health concern.
- H. Hofmeister said that he appreciates the **proposal** but that he is concerned about the amount of record keeping and time that this would consume. He gave the example that it would take a huge amount of time to speciate ethyl acetate, and the threshold is < 2% of the standard. He suggests a compromise other than 6,000 pounds. He suggested range reporting so that sources have bounds to stay within. Range reporting would save time and still provide valuable information.
- A. Stewart said that it is important to discuss what tools give valuable information and to talk about what levels are acceptable.
- Dave Gardner of Briggs & Stratton gave an example of a problematic chemical. He said that octane is reported as a "lump sum VOC" and it has total VOC emission factors. What goes in is not what comes out.
- T. Stocksdale added that there are no factors for styrene or glycol ethers to measure.
- L. Wessel said that these chemicals could be measured based on their inputs.
- T. Stocksdale said that this is a mass balance.
- L. Wessel replied that it does not necessarily have to be a mass balance.
- B. Heitzer commented that the table in the presentation indicates that acetone is toxic. He asked if it would be considered "toxic" for billing purposes, if that is the case. B. Heitzer said that if acetone is included then it becomes toxic and billable so he believes that it should not be listed
- A. Stewart replied that 4 of the 17 toxins have been classified as toxics in NR 438. He explained that 13 of the 17 chemicals are VOCs and will be listed in NR 438 as VOCs. The other 4 are not VOCs and will therefore be listed in the "toxics" category. He added that all Clean Air Act (CAA) chemicals listed in NR 438 are billable and must be listed. Some are listed solely for inventory purposes (i.e., are not regulated under NR 445) and are billable.
- B. Fassbender said that there would be questions about the fees.

- A. Stewart explained that the WDNR would not double bill. Previously acetone was billed as a VOC. Since it has been de-listed as a VOC, it is currently not billed for but if the **proposal** went through, acetone would be billable as a toxic, but the impact should not amount to much based on the current information.
- R. Sherman of Kraft Foods asked about formulating changes. He said that his company went to acetone, which was delisted. They made formulation and production changes switching from methylene chloride to acetone.
- A. Stewart said that the DNR wants to ensure that toxics will not be released at a level where there will be a health effect.
- B. Fassbender posed a question in reference to H. Hofmeister's earlier statement. He asked why there should be a 6,000 pound reporting requirement for substances that have very high emission levels.
- A. Stewart said the reason that 6,000 lb/yr was chosen is that it is the highest threshold for reporting currently used in NR 438.
- H. Handzel asked if it would make sense to add the information at the end of the reporting form.
- H. Hofmeister added that it may be useful to add a separate line item rather than speciating.
- A. Stewart said that the desire is to have a tracking mechanism and for it to be source specific.
- The presentation then proceeded to the fifth slide on the hand-out. The impact of this **proposal** was stated in three points. (1) There would be little impact on fees. The 13 VOCs are already reported and fees paid on them as criteria pollutants. Fees are also already paid on methyl chloroform. (2) A limited number of sources would need to show that they did not pose a health concern so it should not present a significant impact on review requirements. (3) Appropriate language would be provided when rule revision to assure that the DNR had the ability to regulate source specific HAPs if there was a public health impact. The mechanism would allow for open dialogue with a source if there is a concern. This would enable evaluators to see if the information is accurate before modeling occurs. If a concern was found, then a site specific limit could be put into a permit or order to ensure public health is being protected.
- Slide 6 (labeled 7) – This slide shows the possible language change in NR 445. This is NOT a **proposal**, but an example.
- H. Hofmeister asked if it would be this way for all chemicals.
- A. Stewart said this is not the proposed fix, it is just to point out the limitations created by the current language.
- C. Garber summarized the situation by saying that the **proposal** includes (1) not listing the 17 chemicals in NR 445 with TLVs > 99 ppm, (2) the chemicals would be tracked in NR 438 based on a 6,000 lb/yr threshold or some sort of range (3) if a concern is found, dialogue would begin to address the concern
- H. Hofmeister said that the language would be of great interest to all, and stated that the group should revisit how the 17 chemicals got listed as well as the way they are listed. He said that a method should be created for listing them e.g., based on a scientific study.
- R. Salcedo said that he feels the intent is laudable and that consultation with the health community would be very valuable since the whole process is done for health protection purposes.
- C. Garber said that if any one thinks that this issue should be addressed differently to let the DNR staff know now.
- B. Heitzer said the **proposal** for acetone works against that. He said the **proposal** is not productive for acetone since it is one of the least toxic chemicals around.
- P. Stevens asked if this **proposal** would come up again.
- C. Garber said yes the issue would be revisited and this is only the first stab at the issue by DNR staff.
- L. Knobeloch asked if there is a way to look at the health effect of chlorodifluoromethane. She added that ozone depletion is also a health effect.

- J. Myers said that it is difficult to address. Chlorodifluoromethane is an HCFC and CFCs are still being emitted, but that a certain ozone effect from a given amount of CFC released in Wisconsin is unknown. The DNR proposal to list using the TLV approach deals with the direct health effect issues, however.
- C. Garber said that if we had emissions inventory data, it would be possible to act on problems. The idea is to monitor and track chemicals to see if chemicals approach levels posing health impacts.
- C. Terrell said that she seconds what L. Knobeloch said. She believes it is important that the rules allow the ability to act once a problem is found.
- J. Beasom that his only concern with the 17 chemicals is that companies currently report them as ROG, a certain amount of volatile organics. The **proposal** would require companies to do a lot of organic chemical testing in order to report emissions of the specific ROG.
- C. Garber that this sounds like the same point that H. Hofmeister made about speciation.
- D. Gardner said that his company does not need to stack test for formaldehyde now, but asked if the changes would require them to speciate in every single stack.
- A. Stewart said that the level of burden would remain the same to companies as it currently is.
- P. Stevens said that he would like to reiterate some points before leaving the listing issue. He continued by making the following list: (1) He said that this is an issue that many raise. He asked if there is a real public health issue and if there is a need to make this change. He also asked what health impacts there are and if there is any information to support this. (2) Pat also would like the interplay of NR 445 with the federal law to be addressed. He thinks that listing should be considered at the federal level. (3) He said that the practical impact of the listing criteria needs to be considered e.g., on the permitting program. What is the reality check? - He wants these items considered and feels that these are fundamental issues that will be raised again so this should not be a surprise.
- H. Handzel said that he seconds P. Stevens on behalf of the printing industry and paper council.
- C. Garber stated a list of basic issues that need to be further considered including (1) an alternative to the 6,000 lb/yr listing criteria (2) billable compounds and their impact (3) development of a process for health impact of the 17 chemicals listed and any new chemicals in the future. - These issues will be considered and a revised **proposal** will be created.

IV. **Decision Criteria for Setting Threshold Levels in NR 445 (*PROPOSAL*)**

Purpose: To present and discuss Proposed Decision Criteria for setting Table 3 threshold levels in NR 445. The Proposed Decision Criteria may be revised again following the TAG discussion. -

- Presentation of Proposed Decision Criteria
  - Jeff Myers, DNR Air Management Toxicologist

- J. Myers began by stating that the binning approach proposed at the last meeting was not well received and so the **proposal** is to set the thresholds based on a risk factor of 10^{-5} (1 in 100,000).
- J. Myers referred to the table "Decision Rules for Setting an NR 445 Threshold (shading indicates differences)."
- T. Stocksdale asked to make an initial suggestion. He offered a modification to the acutes (i.e., Tables 1 and 2). He suggested that sources be allowed to perform a model in order to certify out of NR 445. The model could be "loaded" by the DNR. He said that actual stack factors for specific stacks be included such as stack height, temperature, etc. This **proposal** would build in a degree of flexibility. Companies with legitimately large stacks and high TLVs would be out. Currently, people over the threshold must submit an application and model to prove that they are out.
- C. Terrell asked it this would be for existing or proposed facilities.
- T. Stocksdale responded that it would be for both.
- C. Terrell asked what information the DNR would need to verify the modeling.
- T. Stocksdale said that all parameters would be available if they exist or would be made available if a facility were proposed. He pointed out that it currently takes a lot of hours to run the calculations. This could be an off-ramp that would be helpful to the DNR and industry. This would enable actual

adjustments to be made that are really present. It takes reality into consideration. A source can prove they are below levels by appropriate demonstration.

- H. Hofmeister said this is an administrative tool that would take the consultant out of the picture.
- Todd Sandman of 3M Corp. said this would simplify the process.
- E. Uram asked where emissions would be captured.
- T. Stocksdale said in NR 438. The emissions would still need to be reported. He offered to write a **proposal** and give it to A. Stewart in early May.
- R. Salcedo asked if source/site specific inputs would be used in the model.
- T. Stocksdale said that factors such as stack height, receptor distance, stack diameter, etc. would be used. This puts real factors in the model. He said that the source could do the work by using the DNR model.

- J. Myers presented a straw **proposal** consisting of 10 slides entitled "Setting Threshold Levels in NR 445."
- Slide 2 discusses non-cancer tables 1,2, & 5 threshold calculations. A threshold is calculated so that emissions from generic stacks will not exceed the Ambient Air Concentration standard (AAC) for those HAPs with non-cancer effects. Modeling sub-group is evaluating whether different dispersion modeling assumptions should be applied to all chemicals.
- Slide 3 shows a flow chart of how the determination is made for allowable emissions to be below the threshold.
- The Carcinogen Straw **Proposal** for Table 3 Chemical Thresholds – The threshold in pounds per year would be calculated using a 10^{-5} risk level and generic stacks for chemicals with known potency values. If there is no known potency value, the threshold would be set at 10 lb/yr.
- Slide 5 – The Rationale for Setting Threshold at 10^{-5} vs. 10^{-6} – the assumptions in the modeling are conservative. (1) The distance from the emission source to the fence line is 30 feet in NR 445 modeling. (2) NR 445 uses 11.5 ft and 25 ft stacks for generic modeling and many stacks are higher. This makes threshold levels lower. (3) Assumes source operates 24 hr/day, 365 days/yr, thus actual emissions may be much lower than potential emissions (4) Assumes a person stays outdoors at the point of highest concentration for 70 years. This is called the maximum exposed individual approach. (5) In comparison, the EPA model for residual risk uses 10^{-6} but 300 ft to the nearest receptor. This does not consider receptors located nearby.
- Slide 6 – Facilities whose allowable emissions are below the thresholds require no further action. Facilities whose allowable emissions are above thresholds will be required to meet BACT or LAER, unless an alternative compliance demonstration is made.
- Slide 7 – Compliance Alternatives – Sources whose allowable emissions exceed threshold levels may demonstrate through site specific modeling that **total** facility emissions of all table 3 HAPs do not exceed 10^{-5} risk at the fence line. These emissions levels will become enforceable permit limits. Note – this option would not be available to sources of emissions of carcinogens of unknown potency.
- Slide 8 – (continues from slide 7) – Sources can take enforceable permit limits on allowable emissions to ensure that their allowable emissions are lower than the Table 3 threshold. (Note: This is different than performing a site-specific risk analysis.)
- Slide 9 – "Table 3 Straw **Proposal** Flow Chart" – If the source emissions are *below* the threshold for allowable emissions then the source requires no further action. If the source emissions are *above* the threshold, then you may either meet the standard by using BACT or LAER OR the source may ensure that (A) allowable emissions from the *facility* risk for all Table 3 chemicals is $< 10^{-5}$ at the fence line or (B) ensure that allowable emissions < threshold.
- Slide 10 is an animated slide that demonstrates the various compliance alternatives explained in Slide 9.

- *Questions*:
  - *Qu.* - E. Uram asked if this concept would cover both stack emissions and fugitive emissions.

- *Ans*. – A. Stewart said that it would include ALL emissions from a facility, if the emissions can be quantified.
- *Qu*. – C. Terrell asked about emissions that go out the window.
- *Ans*. – A. Stewart replied that all emissions sources would be included.
- *Qu.* **–** R. Salcedo asked about the difference in the meanings of the 10^{-5} and 10^{-6} risk level. He asked if this means that there would be 1 cancer case for every 100,000 people exposed under certain conditions versus 1 in a million. He said the difference is a very real and important health policy issue. Fugitive emissions are released at ground level and that is where people are located. He also asked if there is a way to differentiate between fugitive and ground level emissions.
- *Ans*. – J. Myers said that the intent is to look at all sources and do the best modeling available.
- *Ans*. – C. Garber added that the important thing is in order to have this compliance alternative, the risk level for total facility emissions must be below 10^{-5} at the fence line, and this is only an option.
- *Qu*. – The question was asked if risk is additive.
- *Ans*. – J. Myers replied that for risk assessment purposes, experts assume risk is additive and not synergistic. This is the current "state of the art."
- *Qu*. – E. Uram asked about synergism and the effect of multiple facilities with adjacent fence lines.
- *Ans*. – J. Myers said that neither synergism nor multiple facility impacts are considered in this **proposal**.
- *Qu*. – A. Neudorfer asked if the BACT work being done by the DNR and the foundry industry wouldn't belong under compliance alternatives.
- *Ans*. – C. Garber said that this is different from Sue Lindem's work with foundries, and that the DNR staff would like to incorporate the work being done for foundries in the rule revision.
- *Ans*. – J. Myers said that another compliance option would be (see slide 2 on page 3) if the facility takes limits to ensure its allowable emissions are below the threshold, it does not have to meet the standard.
- *Ans*. – A. Stewart added that this goes beyond the current method slightly. Facilities are allowed to cap themselves at a threshold value.
- *Qu*. – D. Gardner asked if this means capping actual emissions below the threshold level.
- *Comment* – R. Salcedo commented that this would be useful to sources involved in waste minimization programs.
- *Qu*. – A. Reitter asked what the definition for allowable emissions is in slide 2 on page 3.
- *Ans*. – A. Stewart replied that allowable emissions here means – what is enforceable in a permit or what a facility is physically capable of doing if there is no permit, or what is in an enforceable order.
- *Qu*. – A. Reitter asked if the current OSHA exemptions would be removed in this **proposal**.
- *Ans*. – A. Stewart said that this is not currently in the **proposal**.
- *Qu*. – R. Sherman asked if IARC removes a substance from a list will there be a provision to remove a compound from the list, and if so, how quickly would this occur.
- *Ans*. – C. Garber responded that one of the focal points of the revision process is to establish a process to allow easier updating of the rule, but that the development of this process is down the road. This applies both to additions and deletions of substances from NR 445.
- *Qu*. – H. Hofmeister asked a few questions to counter E. Uram's questions. He asked what the DNR has actually looked at as far as (1) off property standards (2) zoning e.g., industrial zoning and property restrictions (3) he also questioned the 10 lb/yr basis for chemicals with no potency factor.
- *Comment* – J. Roth added that an additional receptor can be used in the modeling if a school or home is known to be located nearby.
- *Qu.* **–** H. Hofmeister said that those are only triggers. He would like to know if there is an assumption in the parameters that assume a person is actually there or not there. He said this throws in multipliers for people outside of the workscope.

- *Ans.* – A. Stewart replied that the off-property for Table 3 chemicals is not an issue now. For the **proposal**, it would be an issue but that the DNR staff has not gone to that level of detail in their analysis for the definition of off-property, as of yet.
- *Ans.* – C. Garber added that land use changes a lot over time. The modeling models for the fence line and thus changes in land use should not be adversely impacted from the perspective of exposure to toxics.
- *Ans.* – J. Myers also said that the reason for the 10 pound threshold for chemicals with no known potency level is because it is based on the previous risk-bin approach presented at the March meeting in Milwaukee. At this point, he referred back to the "Table 3 Straw **Proposal** Flow Chart" on page 3 slide 9 of his presentation. He commented that if a source is above the threshold, a compliance demonstration must be performed and this **proposal** makes it easier to demonstrate.
- *Qu.* **–** R. Salcedo asked if an option could still be BACT or LAER.
- *Ans*. – The response was yes.
- *Qu.* – J. Beasom asked how long BACT or LAER is good for. If the rule changes and a facility already has BACT or LAER, and the facility is modeled without the BACT/LAER and it is below the threshold, can the BACT/LAER equipment be removed?
- *Qu.* – E. Uram asked if there is an alternative to the 10^{-5}?
- *Ans.* – A. Stewart replied by giving some current examples.
- *Qu.* – C. Terrell asked what the word "ensure" means in this case.
- *Ans.* – A. Stewart replied that it means enforceable.
- *Qu.* – E. Wilusz asked if we are at the point in the process where stupid questions may be asked. (Yes.) He said that somewhere in the back of his mind he envisions that the threshold setting is so sophisticated that we have outstripped reality. He said that a cursory look shows that most of the chemicals will have a threshold of 10 pound or less. Currently, measurements are usually close guesses and not true measurements. He asked how often the DNR performs actual tests of 10 pounds or less that are reliable.
- *Ans.* – A. Stewart replied that the DNR does get tests but that their accuracy is questionable.
- *Qu.* – E. Wilusz said his concern is if a company releases 0.94 lb/yr and then suddenly runs through BACT or LAER. He believes that it has gone past what the current state of knowledge can tell us. He asked what reality can truly tell us now.
- *Ans.* – A. Stewart said that this puts the emphasis on the importance of compliance demonstration. Just how will we do this? Compliance demonstration depends on how the framework is set. He says that he reserves judgment on the issue of whether the DNR has gone too far. The answer will be different for the different chemicals. He also said that knowledge has improved greatly over the past years.

Afternoon Session:

Overview of Afternoon – C. Garber said that a broad informational background and then more detailed information would be provided on the relationship between federal and state hazardous air pollution regulations. The presentation and discussion of "Decision Criteria for Setting Threshold Levels in NR 438" was delayed until the following meeting to provide enough time for the comparison between the federal and state programs.

V. Relationship between Federal and State Hazardous Air Pollutant Regulations

Purpose: To gather suggestions and questions from TAG members regarding the relationship between the federal and state regulations.

- Overview of the Federal HAPs Program
  - Roger Fritz, DNR Air Management Engineer
- Relationship between the Federal and State HAPs programs

- Roger Fritz and Andy Stewart, DNR Air Management Engineers
- Questions and Discussion

A. Roger Fritz began his first presentation entitled "EPA's Hazardous Air Pollutant Program in Contrast to NR 445"
He provided a brief history and future of MACTs as well as other parts of the federal program

- R. Fritz explained the MACT schedule as follows: (note: the years refer to years after the Clean Air Act Amendments of 1990)
  - 2 yr – 40 categories plus coke ovens
  - 4 yr – complete 25% (43 categories)
  - 7 yr – complete 50% (87 categories)
  - 10 yr – complete all (174 categories) – officially by November 15, 2000, actually by 5/15/2002
- EPA's Air Toxics Program
  - Source-specific standards and sector-based standards
    - MACT (floor of top 12% in the industry to set the standard)
    - Residual Risk
    - Utilities study
  - National, regional, community-based initiatives to focus on multi-media and cumulative risks
    - Integrated Urban Air Toxics strategy
    - Great Waters
    - Mercury initiatives
    - PBT & TMDL initiatives
    - Clean Air Partnerships
  - National air toxics assessment (NATA) – EPA collects data from sources, models it and finds toxic hotspots in the USA
    - Emissions inventories
    - Monitoring network
    - Air quality, exposure, and risk modeling
    - Ongoing research on effects and assessment tools
  - Educational outreach
- Roger then presented a timeline for the EPA's program.
- He then gave a more detailed presentation on Maximum Achievable Control Technology (MACT)
  (1) MACT applies to listed industrial source categories
  (2) Technology based standard based on the best 12% performers
  (3) Includes: limitation (e.g., lb./day), initial performance demonstration, monitoring (often CEMs), intensive record keeping & reporting
- Roger then listed which categories fell into the different periodical bins (e.g., 2-year bin, etc.)
- He focused on the 10-year bin slide on page 4 of the handout, which states that there are 62 10-year MACT standards covering 94 source categories. The standards are currently under development, and the statutory deadline is November 15, 2000. The "hammer" date, the date by which these standards must be promulgated or states must develop the standards, is May 15, 2002. Roger then reviewed some selected upcoming MACTs.
- Roger presented a typical timeline for a MACT that involves 6 steps that require a total of nearly 4 years.
- He then finished the presentation with a summary comparison of MACT and NR 445.

MACT	NR 445
• Only one element of federal program	• Comprehensive for stationary sources

• By source category • Covers 188 HAPs • Technology based standard • Only specific units • Specific control method options • Possible to take limits to avoid MACT	• By pollutant (entire facility covered) • Covers 400+ HAPs • Health based standard • Facility-wide • Performance requirement • Possible to take limits to meet standard (25 lb/yr for Table 3A) (300 lb/yr for Table 3B)

- The following questions and comments were made during and after Roger Fritz's first presentation
- *Qu.*- E. Wilusz asked if MACT isn't set by taking an average of the top 12, which could be the best 6%.
- *Ans.* – R. Fritz said that the top 12% is often based on a regulation, which stimulated that higher level of control, such as a RACT rule, which may apply to many facilities and impose the same level of control for everyone in that "top 12%."
- *Qu.* – P. Stevens asked if he could pose a question about federal residual risk.
- *Ans.* – R. Fritz said that the EPA looks at each MACT standard and modeling analysis and then determines on a national basis if there is a need for additional HAP reductions from that industry.
- *Qu.*- P. Stevens asked what the Clean Air Act (CAA) says about the EPA's role.
- *Ans.* – Michele Palmer of the Region V USEPA said that the CAA requires the EPA to address this.
- *Qu.* – P. Stevens asked what the need for NR 445 is and what is the EPA's requirement to address residual risk.
- *Ans.* – M. Palmer said that residual risk is only for MACT standards and only covers a *fraction* of emissions in the US.
- *Qu.* – B. Fassbender asked if it would be possible to cover many more sources if the threshold level were below 10 tons.
- *Ans.* – R. Fritz said that the EPA looks to see if they need to go below 10 or 25 tons, and some MACT standards, such as the dry-cleaner MACTs, cover smaller sources.
- *Qu.*- E. Wilusz said that R. Fritz should not mislead people. He says that the MACT standards cover many of the emissions in the paper industry; it is not just a fraction. He also asked what will happen with HAPs at facilities.
- *Ans.* – R. Fritz said that Ed's comment may be true for a given industry but that he is considering this as a statewide statement including many sources. MACT only covers a fraction of the sources statewide.
- *Comment* – H. Hofmeister noted that the list covering 174 source categories is not a fixed list. Under 112c, the EPA is obligated to look at the source list and revise it. So, the list of 174 is not fixed.
- *Comment* – H. Handzel commented on the 10 ton issue. He said that MACT often goes below 10 tons e.g., electroplaters.
- *Comment* – R. Fritz said that 5 of 174 go down to area sources.
- *Qu.* – R. Salcedo, referring to Slide 5 on page 2 of the presentation, asked when and how he could get more information on bullet 2 "National, regional, community-based initiatives to focus on multi-media and cumulative risk." He asked if the TAG shouldn't be talking more about the multi-media and health risks.
- *Ans.* – M. Palmer of the EPA gave him her number for more information and mentioned that the Urban Air Toxics strategy looks at integrating all of these ideas.
- *Comment* – E. Uram mentioned that the National Air Toxics Assessment resolution goes down to the county level.
- *Ans.* – R. Fritz said that they are doing that at the federal level and they would like to take it down to the census tract level.

- *Comment* – J. Myers mentioned that the modeling is done at the census tract level and then aggregated to the county level.
- *Qu.* – P. Stevens asked why MACT isn't considered comprehensive. He further asked if the EPA had such a program in place, then would it be a good, comprehensive program and would NR 445 be necessary.
- *Ans.* – R. Fritz replied that it would be more timely to pose this question in the year 2010 or 2011, after the EPA has implemented more aspects of the federal program, which is currently not comprehensive. This will all depend on whether the EPA actually can turn the planned program into reality. Remember that the 1990 amendments were created because EPA only completed standards for 8 toxic pollutants in 20 years. With the 1990 CAA amendments, Congress defined the pollutants and charged EPA do develop MACTs on a tight schedule similar to a compliance plan. The rest of the federal HAP program is not so clearly defined. As with the nice program envisioned by the earlier 1970 CAA amendments that never materialized, we need to wait and see what, if anything, EPA develops for risk based elements of the federal program (e.g., residual risk, NATA, urban toxics, etc.)
- *Comment* – M. Palmer noted that the EPA is required to have a 75% reduction in the incidence of cancer cases attributable to hazardous air pollutants. She said the value of the state program is that the federal program could eventually work with the Wisconsin State program and the federal program would eventually bring the whole nation up to an acceptable level.
- *Comment* – R. Fritz added that the EPA only covers 188 chemicals and the DNR covers many more. He believes that asking the question as to what the EPA's program covers is premature and that it could be considered in a decade or so.
- *Comment* – M. Palmer said that it is appropriate for states to add chemicals of concern.
- *Comment.* – P. Stevens said that there is no individual review of chemicals by the DNR at this time.
- *Comment* – B. Fassbender said that he noted a tone of DNR pride on the last slide (comparison of MACT & NR 445). He said that the differences actually create havoc and that it would be nice to reconcile the state and federal programs.
- *Ans.* – R. Fritz asked B. Fassbender to explain what he meant by the "havoc" created by the differences between MACT and NR 445. B. Fassbender referred to multiple requirements in permits. R. Fritz responded by noting that when the federal requirements satisfy the state requirements, permit writers often simply refer to the federal requirements to demonstrate compliance with the state requirement, thus eliminating duplication or conflict.
- *Qu.* - A. Neudorfer asked if NR 445 applies facility-wide and if 445 comes in where MACT does not.
- *Ans.* – R. Fritz said that it is the perfect segue into his next presentation.

B. EPA's Hazardous Air Pollutant Program in Contrast to NR 445

Part II – A Closer Look

R. Fritz explained that Part II has a hypothetical situation based on parts of permits he is presently working on.

- R. Fritz's example consisted of a "job shop" business that handles waste solvent and blends solvent into products. It handles virgin materials as well as off-site waste. One week the business may handle waste toluene and the next xylene. MACT only applies to waste materials and not virgin materials.
- *Qu.* - B. Fassbender asked if MACT applies to one process but next week no MACT for a different process, would NR 445 apply and would it be the same control standard.
- *Ans.* - R. Fritz gave the example that VOC control for a process requires an 85% reduction and MACT requires 95% reduction and for methylene chloride, which is not a VOC or an off-site waste and therefore is not subject to MACT, NR 445 would step in and require control if facility wide emissions would exceed the health based ambient air quality standard.
- *Qu.* – B. Fassbender asked how one knows what control technology to apply to that unit.

- *Ans.* – R. Fritz explained that it does not work that way. Depending on the process and the control requirements, control equipment is either switched on or off. It is not gradually scaled up or down. A facility forecasts its emissions for the following week taking into consideration MACT controls and any VOC controls required. This is to see if a facility would be in compliance. The emissions may need to be reduced further to comply with NR 445 health based standards for facility-wide emissions.
- *Qu.* – B. Fassbender asked if there is the potential that MACT will meet NR 445 requirements.
- *Ans.* – R. Fritz gave an example using methylene chloride. He explained that the MACT only covers the process column where emissions occur. Since NR 445 covers the entire facility, it also covers emissions from storage tanks and trucks. NR 445 also allows flexibility as to how a facility will meet the emission limits as modeled at the fence line. The facility could make the reduction by rescheduling when to fill trucks, reduce the numbers of processes running that material at the same time, use carbon canisters to reduce storage tank emissions (actually chosen for methylene chloride). MACT, on the other hand, is a technology fix that applies to an individual process.
- *Qu.* – T. Stocksdale said that it seems you are saying that when you are using something that is covered by MACT you turn the equipment on and when NR 445 applies, you turn off the equipment.
- *Ans.* – R. Fritz's response was, "Yes and no." Methylene chloride, a nasty pollutant, is not a VOC and not a federal HAP, but it is covered by NR 445. So there would be no MACT equipment to turn on or off and NR 445 actually forces the use of controls in this case.
- *Comment* – A. Stewart added that it is clear in this case that even with MACT emissions standards, emissions would be above NR 445 levels.
- R. Fritz continued with his second presentation with slide 3 on page 1 "MACT applicability." The slide shows the potential to emit (PTE) HAPs and the actual HAPs. He said that in theory, the company could take a synthetic minor but they are a job shop. For this reason, they need the flexibility because the PTE HAPs are regulated. Some HAPs are not covered by the MACT standard.
- *Comment* – E. Wilusz commented that the pulping MACT "buttons up" the process. It catches *all* of the HAPs.
- R. Fritz said that this may be true, but for this theoretical example the situation is different. It is a job shop that handles many different chemicals over time. The actual annual emission values are pretty low but because they operate with different chemicals, it is the acute toxicity during individual weeks that is of concern. It is not the average or total emissions during the entire year that matter as much. In addition, the facility is located in a residential neighborhood. Emissions change each week. This is evident in slide 6 on page 2 "1998 Emissions" bar chart.
- *Comment* – L. Knobeloch noted that cumulative emissions may also be of concern.
- R. Fritz said that the federal program only looks at total HAPs over a year and NR 445 does not handle cumulative toxicity issues.
- L. Knobeloch said that since acute exposures are not handled well that the rule should look at the cumulative total of two or more chemicals that act on the same organs, (e.g., nervous system effects from solvents.) To her it is not clear why this is not already being done and not being currently considered. The groundwater program in the WDNR already uses this approach (the Hazard index approach), why doesn't the air program?
- J. Myers added that a good example of this is when two chemicals that affect the nervous system each have an impact of 80% of the AAC. The cumulative exposure may be 160% of a level of concern for neurotoxicity.
- L. Knobeloch added that the rule does not even consider isomers of the same chemical. (Isomer definition: one of two or more molecules having the same atomic composition and molecular weight but differing in geometrical configuration. Note: Isomers may have similar or radically different effects).
- R. Fritz said that he agrees and that the DNR engineers are bound to interpret the rules only when drafting permits.
- E. Uram asked if R. Fritz would then change the rule.

- R. Fritz said that it is not his job to do this. It is "your" (referring to the TAG members) job to change this situation.
- R. Fritz then continued with the final slide entitled "MACT & NR 445", which compares MACT and NR 445. MACT requires a high level of control on certain units and NR 445 requires control to the extent needed to meet standards set at the fence line. MACT addresses the impact of the total mass of HAPs and NR 445 addresses the acute impact of each HAP.

- A. Stewart continued with another presentation on the relationship between NR 445 and the federal MACT standards by using the one page handout entitled "NR 445 & MACT."
- He began with the first tree chart to break down the overall concept. With the first slide, he explained that there are 112(b) HAP (Clean Air Act Section 112(b)) chemicals that are covered (emitted) by MACT processes and there are those that are Non-MACT processes. There are also Non 112(b) HAPs that are covered (emitted) by a MACT process and those that are not covered. Not all 112(b) HAPs are in 445. Some processes are covered under MACT and others are not. Sometimes MACT is more encompassing and other times it does not cover it at all. He explained that the non-MACT process definitions for 112 (b) HAPs are located in the box at the bottom of the first tree chart. These examples include: (1) MACT standard that has not been promulgated yet, (2) a process that is not in a MACT source category, (3) a process that is excluded due to size (PTE), and (4) a process that is not included in regulation e.g., particulate matter versus a VOC. Certain pollutants may not be included in the regulation if the pollutant is in a different form.
- He continued by explaining that in 1988, when NR 445 was promulgated, the applicability standard in 445 says that if the federal program has no provision then NR 445 applies. NR 445 applies to facility wide emissions.
- *Qu.* - B. Fassbender asked if both MACT and 445 can apply.
- *Ans.* – A. Stewart said that both may apply if the MACT standard was promulgated *after* the NR 445 standard. Andy provided the example with chrome electroplating. The MACT standard was developed after the NR 445 standard and thus both apply.
- *Comment* – C. Garber added that if the state standard changes after the MACT was promulgated, then only the MACT would apply for that pollutant and process.
- B. Fassbender said that this a point of confusion. He said that NR 445 must not be more restrictive than the MACT standard once the MACT standard is promulgated.
- A. Stewart said that NR 445 still applies and that this would not be a change from past practice. This is part of the anti-backsliding provision in NR 445. Original NR 445 controls will not be taken off even after a MACT standard has been promulgated.
- B. Fassbender said that MACT should supersede NR 445.
- *Qu.* - J. Beasom said that the USEPA looks at the emissions of all 188 chemicals on the MACT list, when setting MACT for industry. USEPA then decides which of the chemicals pose significant enough risks to require regulation. Since USEPA has looked at all of these chemicals and subsequently proposed a MACT considering all of them, MACT has been set for all 188 chemicals, and the NR 445 standard should not apply for any of those 188 chemicals in that particular industry subcategory.
- *Comment* – C. Terrell that when Wisconsin adopted the Clean Air Act (CAA), it was agreed that NR 445 would not go away and there would be no backsliding. The agreement was that the health-based standard would remain.
- *Comment* – H. Handzel said his understanding of the rule is that if the feds adopt a NESHAP and Wisconsin has another standard that the state standard should be relaxed unless the health based standard is needed.
- A. Stewart asked if that wasn't under a different context. Wasn't that risk based?
- C. Terrell said the point is that there is to be no backsliding on the health based standard for toxics. The federal program changed and Wisconsin will not give up the health benefits of NR 445. Everyone agreed on the no backsliding provision on the health rule.

- *Qu.* - E. Wilusz said that the CAA has 188 chemicals and NR 445 covers 400+ chemicals. The MACT standard applies to a process and has a technology requirement for the collection and treatment of all HAPs from a process. The MACT control requirement turns out to be an emissions standard. The EPA looks at the 188 listed chemicals and narrows them down to a surrogate list and then sets the standard for the surrogate list. He asked that if it is a VOC or particulate standard then would all VOCs or all particulates be impacted by that?
- *Ans.* - A. Stewart replied that the DNR would not look at surrogates as the only pollutant regulated by MACT.
- *Qu.* – P. Stevens asked, "Where would it say that?"
- *Ans.* – A. Stewart said that this subject clearly falls under the need for guidance from the DNR.
- A. Stewart continued his presentation by saying that compliance with NR 445 standards are sometimes delayed to allow MACT to come out so both programs would work together.
- *Qu.* - T. Stocksdale asked if NR 445 would apply even if the EPA decides a source is too small.
- *Ans.* – A. Stewart said yes.
- *Qu.* – A. Neudorfer asked what if a process already has MACT on and NR 445 requires LAER. Does LAER supersede MACT?
- *Ans.* – A. Stewart replied that if a process and pollutant is covered by a MACT standard and the LAER requirements are established after the MACT standard, then MACT would supersede LAER. If the LAER requirement preceded the MACT standard, then LAER would supersede MACT.
- *Comment* – E. Wilusz said that he feels that this is an issue that needs to be explored more as the process moves along. He added that MACT standards are not cheap, and that he hopes for some regulatory consistency.
- A. Stewart said that MACT is sometimes more restrictive than BACT under 445. There is a variance process for LAER. If LAER is more restrictive than MACT, then it is possible to show that the residual effect on humans and the environment is not too high.
- *Qu.* - B. Fassbender asked if there was no situation in which MACT supersedes NR 445.
- *Ans.* – A. Stewart replied that currently there is not (except for 3 old NESHAPs).
- B. Fassbender said that he does not read the statute that way, and H. Handzel agreed.
- A. Stewart commented that the DNR is being no more stringent than the standard. We're talking about a source and unit which covers a subset of chemicals and units. NR 445 covers the whole facility.
- B. Fassbender read the statute aloud and acknowledged that the court ruled in favor of the DNR, but the rule says that the state standard is not to be more restrictive than the federal standard.
- H. Handzel, referring to subsection 4, said that the Department shall alter the corresponding state standard if the federal standard is relaxed.
- P. Stevens summed it up by saying that if a specific chemical is being considered then the conclusion is that NR 445 applies.
- A. Stewart said that the anti-backsliding measure provides for NR 445 to cover these situations.
- C. Garber added that it is clearly stated that a facility must comply with NR 445 if it precedes promulgation of the MACT standard.
- R.B. Willder said that this is a good area for a sub-group.
- H. Handzel continued by saying that the intention is that federal regulations apply unless a health effect necessitates the application of NR 445.
- C. Garber said that the conversation on this issue needs to end for today but that this will not be the last time it will be discussed.

VI. Review meeting schedule and make adjustments, as necessary

- C. Garber handed out a sign up sheet for TAG members to list their availability for a meeting in June.

- C. Garber then went over the schedule. The May 25 meeting will include (1) a discussion on inventories, (2) another report from the modeling subcommittee, (3) a rehash of the TLVs of 99 ppm or greater, (4) the "off ramp" issue of the threshold that T. Stocksdale will draft, (5) and discussion of the alternate compliance option to BACT/LAER.
- There will be a meeting in late June and then a meeting in mid August.
- **NOTE: The date for the May meeting is <u>Thursday, May 25 in Room 027 of the DNR in GEF 2</u>. The finalized date for the June meeting is Thursday, June 22 and this will be held at Wepco's auditorium in downtown Milwaukee on Michigan Street near the Grand Avenue Mall. An agenda and a detailed set of directions will be provided at a later date.**

VII. Information on Inventories by Andy Stewart

- A. Stewart showed a graphic log chart entitled "NR 438 Reporting Values."
- P. Stevens asked if the table could be e-mailed to everyone, and the answer was yes. It will be e-mailed and posted on the web site.
- H. Handzel requested that **proposal**s be easily identified in the notes for those TAG members who were not able to attend this meeting.
- E. Uram was asked to go over what the health and environment sub-group would do.
- B. Fassbender asked if all persons could get materials from the sub-groups.

- E. Uram explained the concept of the health and environment sub-group. He said it is meant to keep health and welfare foremost in mind. Health should be used as a measuring stick and should be included in the statutes and rule. There will be a 30 minute meeting after the TAG meeting where a list of issues will be developed.
- *Qu.* - E. Wilusz asked two questions. The first is if a web site exists where there is a chemical dictionary or encyclopedia to help identify and describe the various chemicals.
- *Ans.* - He was informed that the EPA has the IRIS web site. The IRIS web site is: http://www.epa.gov/iris/
- *Qu.* – E. Wilusz's second question was if the Department looks at what percentage of emissions will be covered by MACT standards as best as the Department knows it. He said what applies to the paper industry may not apply to the rest of the companies. He said there may be a number of unregulated emissions.
- *Ans.* - A. Stewart said that they (DNR staff) ask themselves a similar set of questions. He said nothing is readily available at this point but that they could look at major industrial sectors.

VIII. Discuss the formation of sub-groups (*PROPOSAL*)

- C. Garber raised the topic of the silica work group. She introduced it by stating that it is a ubiquitous compound and the issue is very complex. It deserves more in-depth study. When NR 445 was first adopted, there were sub-groups on formaldehyde and chloroform. There is presently not enough staff to handle the Silica Study Group at the same time as revising NR 445. She said that the **proposal** is to list silica at the moment as a Table 3 compound and to form a study group after the majority of the work on NR 445 revisions were completed. The group would be charged with reviewing monitoring data, developing an emissions inventory, and evaluating emission control techniques and their costs. A timeline would be set and the group would prepare recommendations. It will be a rigorous process but there is not enough staff to do this concurrently with revising NR 445.
- *Qu.* – J. Beasom asked if this would be crystalline silica or amorphous or both.
- *Ans.* – C. Garber said that the sub-group would only look at crystalline silica. They will begin by listing the affected industries, which may include but is not limited to quarries, foundries, cement factories,

those companies working with abrasive materials, and road construction. The primary question is what should LAER be.

- RB Willder said all persons involved in the transportation, concrete, and building industries would be interested. He added that this would affect nearly everyone everywhere in the state.

- C. Garber said ended with a reminder that the next meeting will be on May 25 in Room 027 or the GEF II (DNR) building in Madison.

Note: Michele Palmer of USEPA Region V requested that the following Air Toxics Program website be passed on to TAG and committee members. It is: www.epa.gov/ttn/uatw/epaprogs.html
She may be reached directly by phone at (312) 886-0387 or her e-mail address is: palmer.michele@epa.gov

Notes Prepared by: Bart Sponseller, Bureau of Air Management

DNR Staff Contact Information:

Name	Position	Phone	E-mail
Caroline Garber	Environmental Studies Section Chief	(608) 264-9218	garbec@dnr.state.wi.us
Andy Stewart	Environmental Engineer	(608) 266-5499	stewaa@dnr.state.wi.us
Jeff Myers	Environmental Toxicologist	(608) 266-2879	myerj@dnr.state.wi.us
Bart Sponseller	Air Management Specialist	(608) 266-5232	sponsb@dnr.state.wi.us
John Roth	Air Dispersion Modeler	(608) 267-0805	rothja@dnr.state.wi.us